

WHAT IS CLAIMED IS:

1. A lens with an infrared ray filter comprising an infrared ray insulating dielectric multilayer film for cutting infrared rays on one of the surfaces of a glass plane-convex lens having a flat refractive surface on one side and a convex refractive surface on the opposite side.

2. A lens with an infrared ray filter according to Claim 1, characterized in that the glass plane-convex lens is constructed in such a manner that projections constituting the convex surfaces of the convex lenses are formed integrally on one side of the flat plate.

3. A lens with an infrared ray filter according to Claim 1 or Claim 2, characterized in that the refractive surface of the convex surface is an axisymmetric aspherical surface in which the curvature radius decreases with the distance from the optical axis.

4. A lens with an infrared ray filter according to Claim 2, characterized in that the geometric center of the contour of the flat plate coincides with the optical axis of the convex lens.

5. A method of manufacturing a lens with an infrared ray filter comprising:

a molding step for molding a multi-cavity lens molding having a plurality of projections constituting refractive surfaces of the convex surfaces of the convex lenses formed integrally on the surface of the flat plate with glass;

a film-forming step for providing an infrared ray insulating dielectric multilayer film for cutting the infrared rays on either one

of the surfaces of the multi-cavity lens molding; and

a cutting step for cutting the portions of the flat plate of the multi-cavity lens molding provided with the infrared ray insulating dielectric multilayer film into individual projections.

6. A method of manufacturing a lens with an infrared ray filter according to Claim 5, characterized in that the multi-cavity lens molding includes the projections being different in shape from each other.

7. A method of manufacturing a lens with an infrared ray filter according to Claim 5 or Claim 6, characterized in that alignment marks for aligning are transferred on the surface of the flat plate of the multi-cavity lens molding in the molding step.

8. A method of manufacturing a lens with an infrared ray filter according to Claim 7, characterized in that the alignment mark is transferred along cutting lines to be cut in the cutting step on the flat surface of the flat plate into a V-groove in cross-section, and the cutting step is a step of cutting by a dicing blade so as to leave the portion in the vicinity of both edges of the V-groove.

9. A compact camera comprising:

a solid-state image sensing device for converting the received light beam into an electric signal;

a housing covering around the solid-state image sensing device and having an opening; and

a lens with an infrared ray filter provided with an infrared ray insulating dielectric multilayer film for cutting the infrared rays on

either one of the surfaces of the glass plane-convex lens including a flat refractive surface on one side and a convex refractive surface on the other side as the entire portion or a part of a lens system for converging the light beam coming through the opening onto the solid-state image sensing device.